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CCMS END USER MANUAL

EP2

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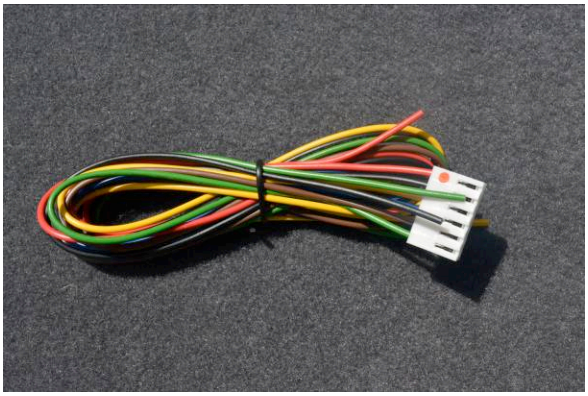
1 - EP2

Pinouts:

6 Pin Harness:

The EP2 system uses a 6 pin harness for all of its basic functions. The correct orientation of the harness is marked by a **red** dot that must be matched up with the **red** dot situated on the EP2 unit itself.

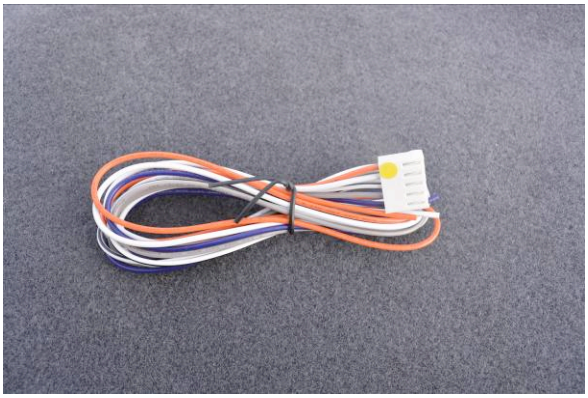


The pinout for the six pin harness is as follows:

1. **Red Wire** → Battery
2. **Black Wire** → Ground
3. **Yellow Wire** → Ignition
4. **Blue Wire** → Deactivation Wire
5. **Brown Wire** → Activation Wire
6. **Green Wire** → Vehicle Horn (Through Relay)

5 Pin Harness:

The EP2 system uses a 5 pin harness for all of its optional functions and it is possible that not all wires will need to be used during installation. The correct orientation of the harness is marked by a **yellow** dot that must be matched up with the **yellow** dot situated on the EP2 unit itself.



The pinout for the five pin harness is as follows:

1. **Grey Wire** → Brake Switch
2. **Purple Wire** → Dome Lights
3. **White Wire, Black Stripe** → GPS Output #1
4. **White Wire, Brown Stripe** → GPS Output #2
5. **Orange Wire** → Spare I/O

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Speaker Harness:

The EP2 uses a 2 pin harness connected to a standard 3.5mm female audio jack to provide audio to the external speaker. The correct orientation of the harness is marked by a **blue** dot that must be matched up with the **blue** dot situated on the EP2 unit itself.

The pinouts for the speaker harness is as follows:

1. **Red Wire** → Audio Out
2. **Black Wire** → Ground

Motion Sensor Harness:

The EP2 uses a 3 pin harness to supply power and communicate with the motion sensor. The correct orientation of the harness is marked by a **green** dot that must be matched up with the **green** dot situated on the EP2 unit itself.

1. **Red Wire** → Battery
2. **Black Wire** → Ground
3. **Green Wire** → Communication

Rear Vehicle Transmitter (RVT):

The EP2 system works in conjunction with a Rear Vehicle Transmitter (RVT) that acts as the reset button for the alarm system. The RVT is NOT a simple switch. The RVT is a module that pulses a ground signal at a frequency of 15Hz. This allows us to use already existing wiring in the bus to simplify installation. The RVT **CANNOT** be replaced by another switch or module.

The pinout for the RVT is as follows:

4. **Red Wire** → Battery
5. **Black Wire** → Ground
6. **Blue Wire** → Front Warning Buzzer (Ground Terminal)

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Installation :

Wiring schematics can be found at the end of the manual for further clarification.

Installing 6 Pin Harness:

1. Connect the **black wire** to a good ground.

2. Connect the **red wire** to a 12V source that is always hot.

3. Connect the **yellow wire** to a 12V source that is hot when the ignition is on.
   It is recommended to connect to the small ignition terminal of the solenoid used for power in the driver's side panel

4. Connect the **blue wire** to the front warning buzzer for the rear door of the vehicle. (Ground Terminal)
   *There are two wires on the buzzer; one becomes hot when the ignition is turned on while the other runs to the rear door switch. Connect it to the side of the terminal that runs to the rear door switch *

   If there is no front warning buzzer a wire must be run from the front of the vehicle to the rear in order to connect to the RVT

5. Connect the **brown wire** to a 12V source that becomes hot when a child is picked up.
   Connecting to the red overhead flashing lights is recommended

6. Connect the **green wire** to a relay that is connected to the horn.
   *The **green wire** supplies a ground signal for the relay and cannot drive a horn directly. **A relay is always required to drive the horn***

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Installing 5 Pin Harness:

1. Connect the **grey wire** to the side of the brake pedal that becomes hot when the brake pedal is pressed.

2. Connect the **purple wire** to a relay that is connected to the wire that controls the interior lights.
   *The **purple wire** supplies a ground signal for the relay and cannot drive the lights directly. **A relay is always required to drive the lights** (this is included in the monster harness)*

3. Connect the **White Wire** with a **Black Stripe** to the appropriate wire on your GPS device. *This is the wire for the #1 GPS Output*

4. Connect the **White Wire** with a **Brown Stripe** to the appropriate wire on your GPS device. *This is the wire for the #2 GPS Output*

5. Connect the **Orange Wire** either to the device or sensor that you wish to monitor (Input) or to the correct wire on your GPS device. (If it is a third GPS output). *If there is any confusion as to whether or not you need to connect this wire please do not hesitate to contact Technical Services*

Installing Dome Light Harness *(Optional)*:

5-Pin Relay Installation:

Wire colours mentioned are consistent with the wires connected to the relay on the monster harness provided. *(not to be confused with the wires from the 6 pin harness)* A 5 pin relay is required to drive the dome lights.

1. Cut the wire running from the dome light switch to the dome lights.

2. Connect Pin 87a (**Red Wire**) to the dome light switch. The end of this wire is equipped with a butt connector filled with gel.

3. Connect Pin 30 (**Blue Wire**) to the wire going to the dome lights from the switch. The end of this wire is equipped with a butt connector filled with gel.

4. Connect Pin 87 (**Yellow Wire**) to a 12V source that is always hot. (This line should be paired with a 20amp fuse)

5. Connect Pin 86 (**White Wire**) to a 12v source that is always hot. (This line should be paired with a 20amp fuse)

   *On the full harness provided the **white wire** and the **yellow wire** are connected together through one fuse and connected to a **red wire** with an eyelet for easy connection to a 12v source.*

6. Connect pin 85 (**Purple Wire)** to the **Purple Wire** of the 5 pin harness.

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Installing the External Speaker:

The external speaker should be mounted above the drivers head, to the left.

1. Locate suitable mounting place for the external speaker.
2. Remove speaker from the mounting bracket by turning the knobs located on each side of the mounting bracket.
3. Using provided screws, affix the mounting bracket to the bus panels.
4. Drill a 3/8 inch hole for the speaker harness 1 ½ inches below the mounting bracket.
5. Remove the panel to the left and above the drivers head.
   This panel may be left off at the end of speaker installation if installation of a Motion Sensor is required
6. Re-Attach the speaker to the mounting bracket using the screws removed in Step 2.
7. Fish the speaker wire through the hole drilled in step 4 and pass it through to the removed panel.
8. Attach the 3.5mm male end of the motion sensor wire to the 3.5mm female end on the motion sensor harness.
9. Run the speaker harness down pillar “B” (located just to the left of the driver seat) to the electrical box where the Child Checkmate Unit will be mounted.

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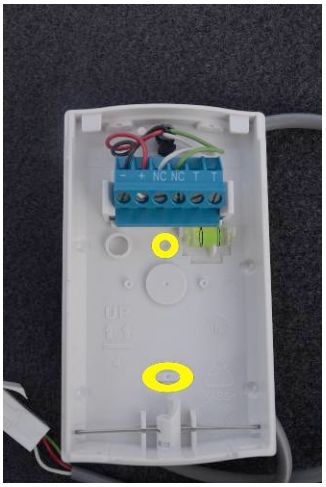
Installing Motion Sensor:

The motion sensor should be installed near the centre of the front panel of the bus. Additional diagrams and OEM documentation can be found in the box in which the motion sensor is shipped.

1. Locate suitable mounting place for the motion sensor.
2. Drill a ¾ inch hole for the motion sensor harness.
3. Remove the panel to the left and above the drivers head. *This is the same panel removed for installation of the external speaker*
4. Fish the Motion Sensor harness through the drilled hole and pass it through to the removed panel.
5. Turn the arrow at the bottom of the motion sensor so that it is facing the open lock symbol.
6. Hold the bottom of the motion sensor and firmly slide the top half downwards to separate the two half's. (Pushing towards the open lock symbol)
7. Attach the 4 pin connector from the Motion Sensor to the 4 pin connector on the motion sensor harness.
8. Insert Plastic grommet into the hole drilled in step 2 and feed the wire through until the motion sensor is flat against the paneling.
9. Mount the Motion Sensor to the panel by screwing through the indentation in the plastic to the left of the level, using the self tapping screws provided.
   (See figure to right, yellow rings in picture indicate approximate area and size of indentations.)
10. Ensure that the motion is level (using the level in the motion sensor housing as a guide).
11. Secure motion sensor by using the second provided screw. It should be screwed through the plastic indentation just above the locking mechanism at the bottom of the motion sensor casing.



12. Re-Attach the faceplate of the motion sensor to the body by aligning the four corners and pushing upwards on the faceplate. The faceplate will automatically lock itself once it is latched.
13. Run the motion sensor harness down pillar "B" (located just to the left of the driver seat) to the electrical box where the Child Checkmate Unit will be mounted.

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Installing the RVT:

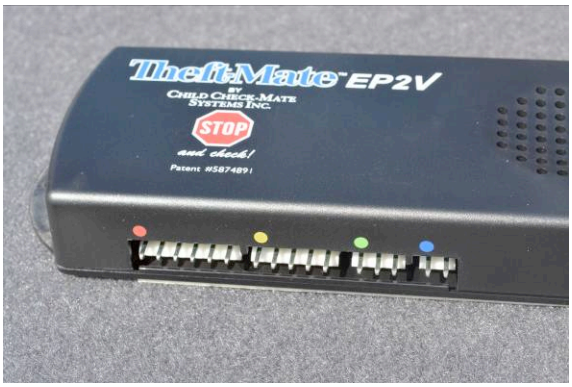
*Note: If the **blue wire** is hooked up to a 12V source, it WILL damage the RVT and cause it to cease to function.

1. Connect the **black wire** to a good ground.
2. Connect the **red wire** to a 12V source that is hot when the ignition is turned on.
   Connecting to the rear door buzzer is recommended
3. Connect the **blue wire** to the wire running to the front warning buzzer for the rear door of the vehicle.
   *The wire in question is the same wire that is connected to the **blue wire** of the 6 pin harness at the front of the vehicle. *

   If there is no front warning buzzer a wire must be run from the front of the vehicle to the rear in order to connect to the child check system.

Location and mounting of the EP2 unit:

1. Locate a convenient mounting area for the EP2 Alarm Unit within the main electrical panel at the front of the vehicle.
2. Before securing the unit, check to ensure that its location is central enough so that all the required harnesses are able to reach the EP2.
3. Secure the unit to the wall using the double sided tape provided. Screws may also be used to further secure the unit.
4. Insert harnesses into their respective ports, ensuring that the coloured dots match up before inserting the harness into the system.



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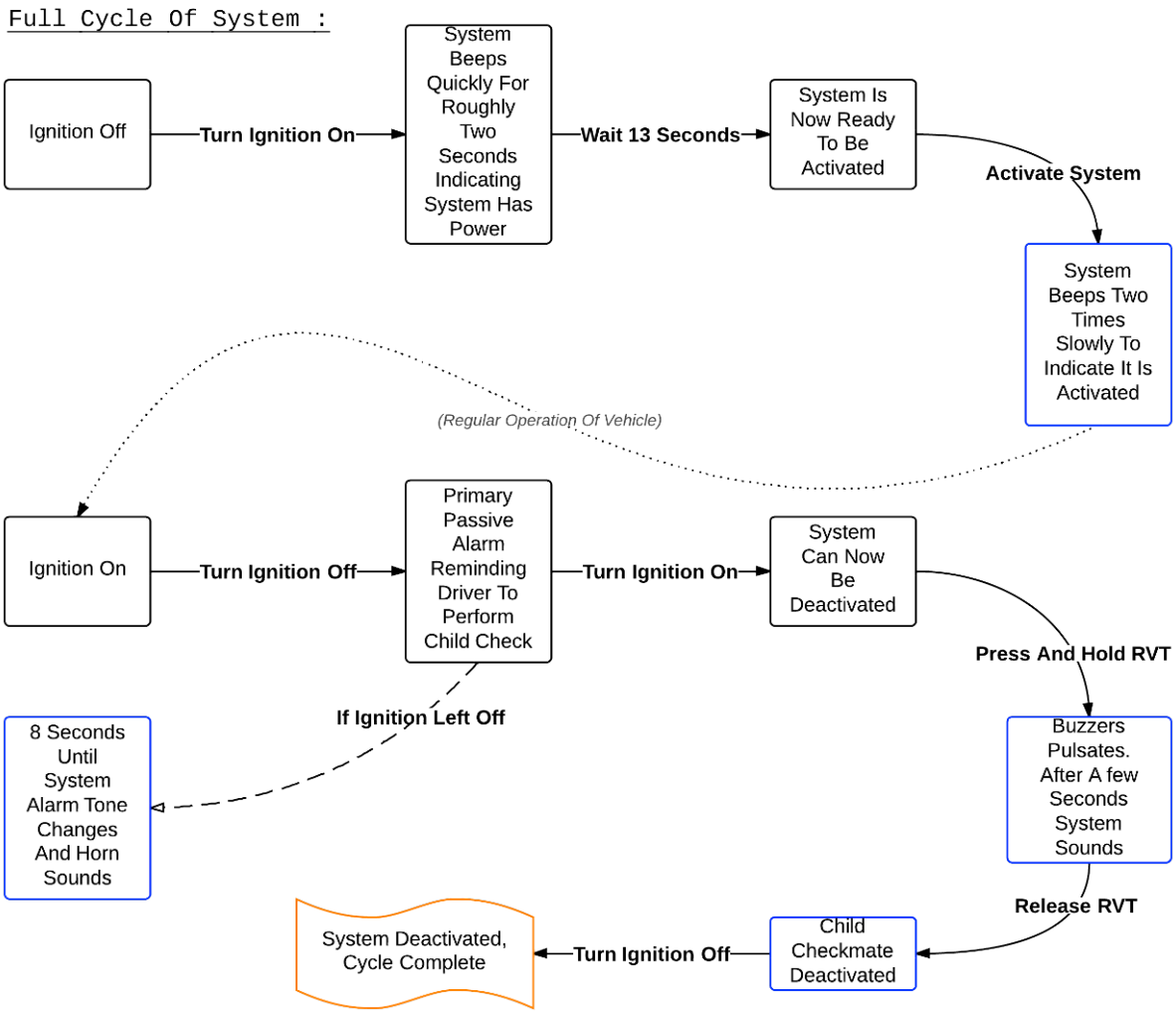
Operation Guide:

If the system is equipped with the external speaker the appropriate voice instructions will be heard throughout operation.

Flow Chart:

1-System Cycle


Full Cycle Of System :
Ignition Off
Turn Ignition On
System Beeps Quickly For Roughly Two Seconds Indicating System Has Power
Wait 13 Seconds
System Is Now Ready To Be Activated
Activate System
System Beeps Two Times Slowly To Indicate It Is Activated
(Regular Operation Of Vehicle)
Ignition On
Turn Ignition Off
Primary Passive Alarm Reminding Driver To Perform Child Check
Turn Ignition On
System Can Now Be Deactivated
Press And Hold RVT
Buzzers Pulsates. After A few Seconds System Sounds
Release RVT
If Ignition Left Off
8 Seconds Until System Alarm Tone Changes And Horn Sounds
Child Checkmate Deactivated
Turn Ignition Off
System Deactivated, Cycle Complete

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All Child Check-Mate systems share a basic system cycle that governs its operation which does not change, regardless of model.

Activating the Child Check-Mate System:

1. Turn the ignition on.
    - The system makes quick beeping noises for two seconds. This indicates that the system has power.

2. Wait 13 Seconds and then trigger the activation wire.
    - Activate the system by using the input where the **brown wire** is tied in.

    - The system will generate two long tones and the external speaker will indicate that the system has been activated.

At this point the system is active and you may proceed with the regular operation of the vehicle.

Deactivating the Child Check-Mate System:

1. Turn the ignition off.
    - The system will make beeping noises reminding the driver that they must perform their child check

2. Turn the ignition on.
    - The external speaker will ask you to perform your child check.

    - IF THE IGNITION IS NOT TURNED BACK ON WITHIN 8 SECONDS THE HORN WILL BEGIN TO SOUND. This is because the system assumes the driver has left the vehicle without performing their child check. Turn the ignition on to silence the alarm.

    - The system will make three tones every thirty seconds reminding the driver to perform their child check. After a set amount of time the system will assume the driver has left the vehicle without performing their child check and will sound the horn. Cycle the ignition (Off/On) to silence the alarm and reset the timer.

3. Walk to the rear of the vehicle and press the RVT until the system makes quick beeps, similar to when the ignition is first turned on.
    - While holding the RVT down you will hear the front warning buzzer pulsate. *(If connected)*

    - The external speaker will indicate that Child Check-Mate is now deactivated.

At this point the system is deactivated and it is safe to turn off the ignition and leave the vehicle.

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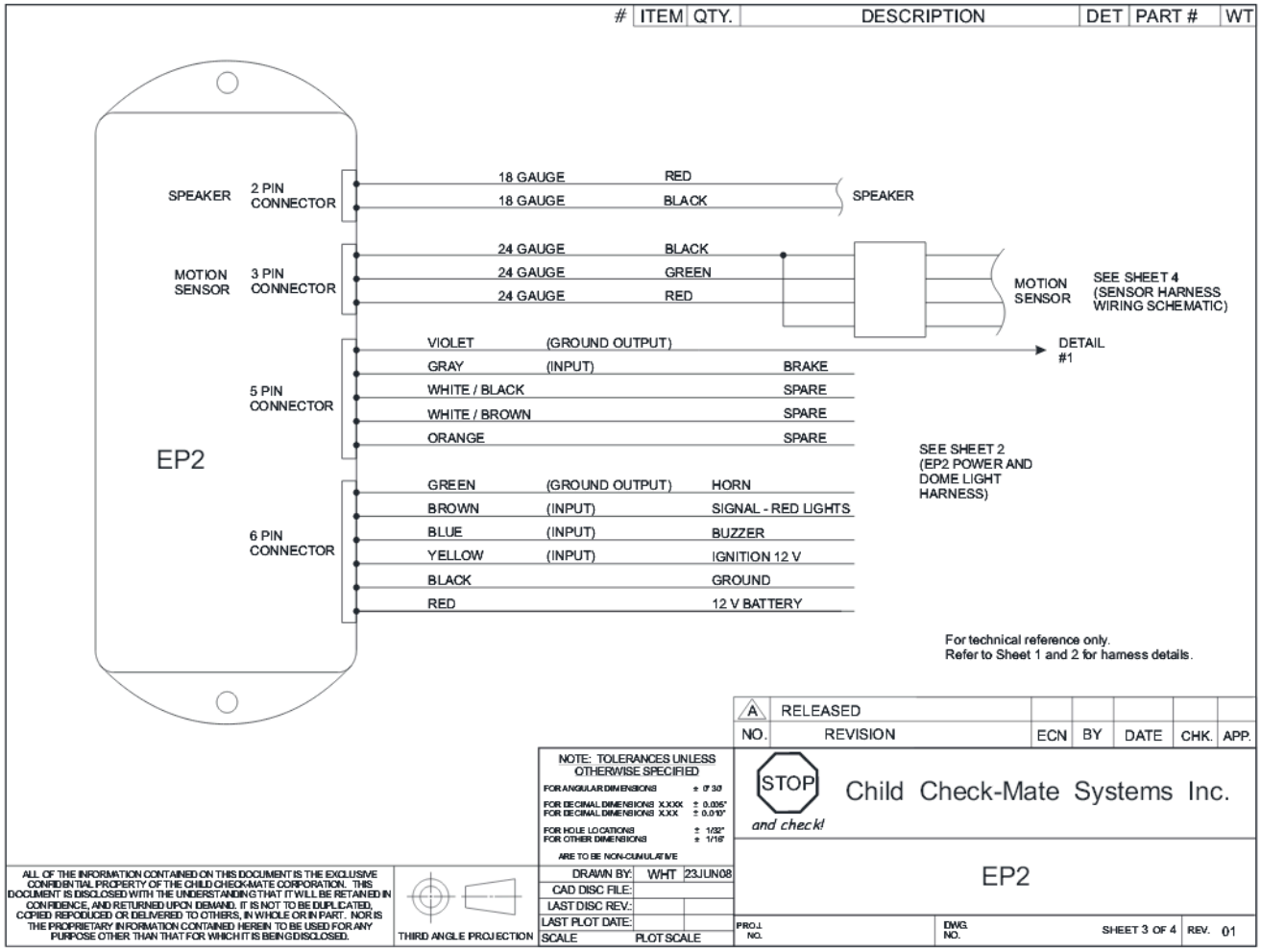
2 - Appendix:

EP2 Pinout Schematic:

Also available at http://www.childcheckmate.com/support/



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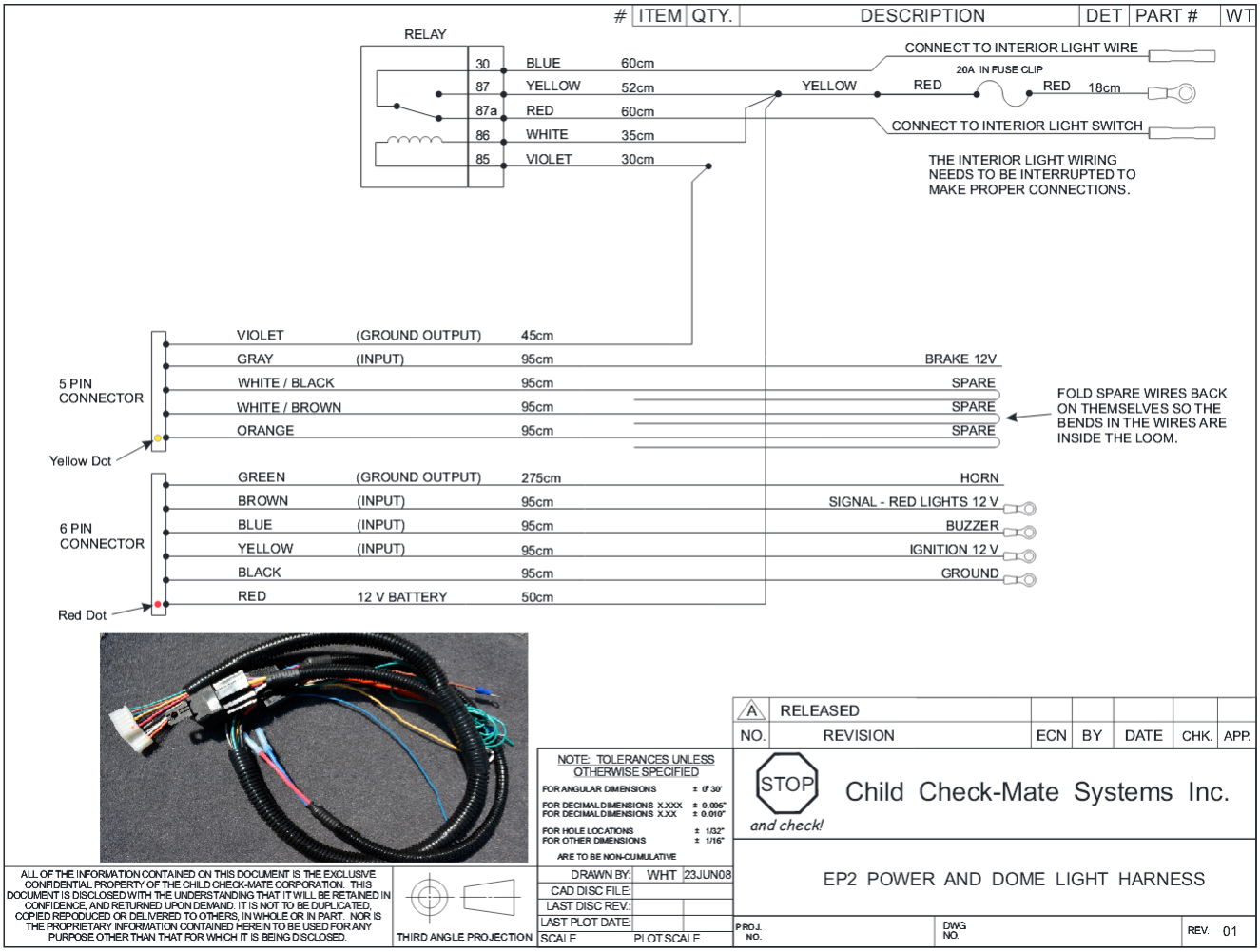
EP2 Monster Harness


RELAY
30 BLUE 60cm
87 YELLOW 52cm
87a RED 60cm
86 WHITE 35cm
85 VIOLET 30cm
CONNECT TO INTERIOR LIGHT WIRE
20A IN FUSE CLIP
YELLOW
RED
RED 18cm
CONNECT TO INTERIOR LIGHT SWITCH
THE INTERIOR LIGHT WIRING NEEDS TO BE INTERRUPTED TO MAKE PROPER CONNECTIONS.
5 PIN CONNECTOR
VIOLET (GROUND OUTPUT) 45cm
GRAY (INPUT) 95cm
WHITE / BLACK 95cm
WHITE / BROWN 95cm
ORANGE 95cm
Yellow Dot
BRAKE 12V
SPARE
SPARE
SPARE
FOLD SPARE WIRES BACK ON THEMSELVES SO THE BENDS IN THE WIRES ARE INSIDE THE LOOM.
6 PIN CONNECTOR
GREEN (GROUND OUTPUT) 275cm
BROWN (INPUT) 95cm
BLUE (INPUT) 95cm
YELLOW (INPUT) 95cm
BLACK 95cm
RED 12 V BATTERY 50cm
Red Dot
HORN
SIGNAL - RED LIGHTS 12 V
BUZZER
IGNITION 12 V
GROUND
ITEM QTY. DESCRIPTION DET PART # WT
A RELEASED
NO. REVISION ECN BY DATE CHK. APP.
NOTE: TOLERANCES UNLESS OTHERWISE SPECIFIED
FOR ANGULAR DIMENSIONS ± 0° 30'
FOR DECIMAL DIMENSIONS X.XXX ± 0.005"
FOR DECIMAL DIMENSIONS X.XX ± 0.010"
FOR HOLE LOCATIONS ± 1/32"
FOR OTHER DIMENSIONS ± 1/16"
ARE TO BE NON-CUMULATIVE
DRAWN BY: WHT 23JUN08
CAD DISC FILE:
LAST DISC REV.:
LAST PLOT DATE:
SCALE PLOT SCALE
Child Check-Mate Systems Inc.
and check!
EP2 POWER AND DOME LIGHT HARNESS
PROJ. NO.
DWG NO.
REV. 01
THIRD ANGLE PROJECTION
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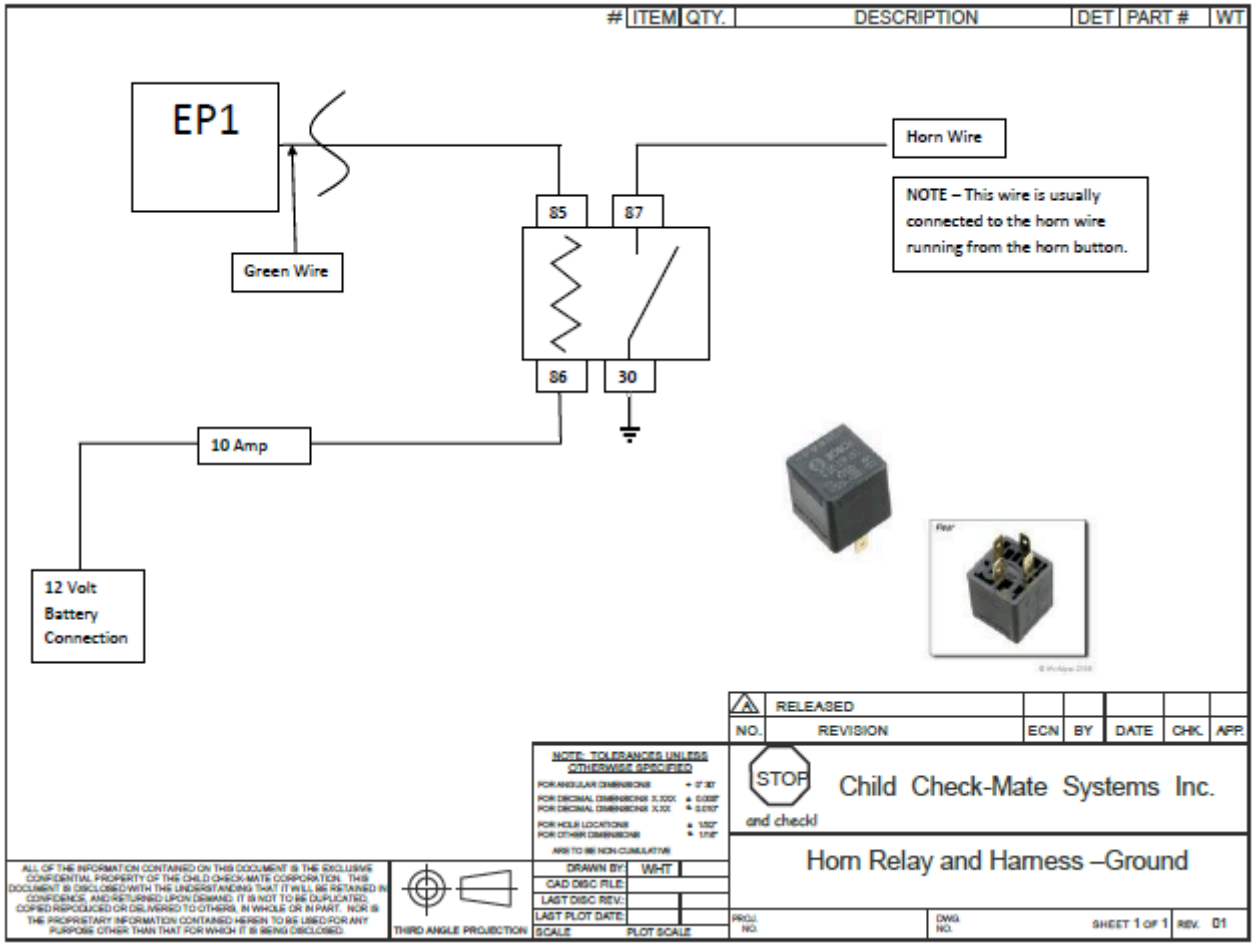
Horn Relay and General Relay Installation:

If the horn requires a ground signal:

Also available at http://www.childcheckmate.com/support/



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If the horn requires a 12V source:

Also available at http://www.childcheckmate.com/support/.